

AMENDMENTS TO THE CLAIMS

Please amend claims 16 and 22, and add new claims 26-38 to read as follows.

1-8. (Cancelled)

9. (Previously Presented) The apparatus according to Claim 16, wherein said cooling pipe is disposed near an outer periphery of said moving unit.

10. (Previously Presented) The apparatus according to Claim 16, further comprising a laser interferometer for measuring a position of said moving unit.

11-15. (Cancelled)

16. (Currently Amended) A stage apparatus comprising:

a base plate;

a moving unit movable along a surface of said base plate;

a linear motor which drives said moving unit and includes a coil unit in said moving unit;

a gas bearing unit which supports said moving unit on ~~the~~ said base plate; and

a cooling unit which includes a cooling pipe provided in said moving unit through which a coolant flows to cool said coil unit,

wherein (i) said cooling pipe provides coolant flow that cools a gas used by said gas bearing unit, wherein (ii) said gas bearing unit has a supply pipe through which the gas flows, wherein (iii) said supply pipe is not connected to said cooling pipe, and (iv) at least a portion of said supply pipe is disposed adjacent to or is surrounded by said cooling pipe.

17. (Previously Presented) The apparatus according to Claim 16, wherein said cooling unit is disposed between said coil unit and a substrate mounted on said moving unit.

18. (Cancelled)

19. (Previously Presented) The apparatus according to Claim 16, wherein a direction in which the coolant flows in said cooling pipe is opposite to that in which the gas flows through said supply pipe.

20. (Cancelled)

21. (Previously Presented) The apparatus according to Claim 16, wherein said moving unit comprises a fine-motion actuator which moves a substrate mounted on said moving unit, and said cooling pipe is disposed between said coil unit and said fine-motion actuator.

22. (Currently Amended) A stage apparatus comprising:

a base plate;

a first moving unit movable along a surface of said base plate;

a linear motor which drives said first moving unit and includes a coil unit in said first moving unit;

a second moving unit disposed above said first moving unit, which moves with respect to said first moving unit; and

a cooling unit including a cooling pipe disposed between said first and second moving units, wherein a coolant flow through said cooling pipe absorbs a heat transmission from said coil unit to said second moving unit.

23. (Previously Presented) A stage apparatus according to Claim 22, wherein said second moving unit moves within a range smaller than that of said first moving unit.

24. (Previously Presented) A stage apparatus according to Claim 16, wherein said linear motor is a surface motor.

25. (Previously Presented) A stage apparatus according to Claim 22, wherein said linear motor is a surface motor.

26. (New) A stage apparatus comprising:

a base plate;

a first moving unit movable along a surface of said base plate;

a linear motor which drives said first moving unit and includes a coil unit in said first moving unit;

a second moving unit disposed above said first moving unit, which moves with respect to said first moving unit;

a gas bearing unit which supports said first moving unit on said base plate; and

a cooling unit which includes a cooling pipe provided in said first moving unit through which a coolant flows to cool said coil unit,

wherein (i) said cooling pipe provides coolant flow that cools a gas used by said gas bearing unit, (ii) said gas bearing unit has a supply pipe through which the gas flows, (iii) said supply pipe is not connected to said cooling pipe, and (iv) at least a portion of said supply pipe is disposed adjacent to or is surrounded by said cooling pipe.

27. (New) The apparatus according to Claim 26, wherein said cooling pipe is disposed near an outer periphery of said first moving unit.

28. (New) The apparatus according to Claim 26, further comprising a laser interferometer for measuring a position of said first moving unit.

29. (New) The apparatus according to Claim 26, wherein a direction in which the coolant flows in said cooling pipe is opposite to that in which the gas flows through said supply pipe.

30. (New) A stage apparatus according to Claim 26, wherein said second moving unit moves within a range smaller than that of said first moving unit.

31. (New) A stage apparatus according to Claim 26, wherein said linear motor is a surface motor.

32. (New) A stage apparatus comprising:
a base plate;
a moving unit movable along a surface of said base plate;
a linear motor which drives said moving unit and includes a coil unit in said moving unit;
a gas bearing unit which supports said moving unit on said base plate; and
a cooling unit which includes a cooling pipe provided in said moving unit through which a coolant flows,

wherein (i) said gas bearing unit has a supply pipe through which a gas flows, (ii) said cooling unit is provided between said coil unit and said supply pipe, and (iii) at least a portion of said supply pipe is disposed adjacent to or surrounded by said cooling pipe.

33. (New) The apparatus according to Claim 32, wherein said cooling unit is disposed near an outer periphery of said moving unit.

34. (New) The apparatus according to Claim 32, further comprising a laser interferometer for measuring a position of said moving unit.

35. (New) The apparatus according to Claim 32, wherein said cooling unit is disposed between said coil unit and a substrate mounted on said moving unit.

36. (New) The apparatus according to Claim 32, wherein a direction in which the coolant flows in said cooling pipe is opposite to that in which the gas flows through said supply pipe.

37. (New) The apparatus according to Claim 32, wherein said moving unit comprises a fine-motion actuator which moves a substrate mounted on said moving unit, and said cooling pipe is disposed between said coil unit and said fine-motion actuator.

38. (New) A stage apparatus according to Claim 32, wherein said linear motor is a surface motor.